Data Sheet (Cat.No.TMAY-01411)

TargetMol

Anti-CD3D Antibody (4C442)

Product Details

Ig Type:	Mouse IgG1
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	4C442
Purification:	Protein A

Applications

Verified Activity:	1. Immunochemical staining of human CD3D in human tonsil with mouse Mab (1:60, formalin-fixed paraffin embedded sections). Positive staining was localized to membrane of T cells. The left panel: tissue incubated with primary antibody; The right panel: tissue incubated with the mixture of primary antibody and antigen (recombinant protein). 2. Immunochemical staining of human CD3D in human spleen with mouse Mab (1:60, formalin-fixed paraffin embedded sections). Positive staining was localized to membrane of T cells.
Application:	IHC-P
Recommended	IHC-P: 1:50-1:200

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human CD3d / CD3 delta protein (TMPY-01196)
Antigen Species:	Human
Synonyms:	T3D;CD3 δ;CD3 delta;IMD19;CD3-DELTA;CD3d molecule, δ (CD3-TCR complex);CD3-δ;CD3d molecule, delta (CD3-TCR complex)

Research Background

T-cell surface glycoprotein CD3 delta chain, also known as CD3D, is a single-pass type I membrane protein. CD3D, together with CD3-gamma, CD3-epsilon and CD3-zeta, and the T-cell receptor alpha/beta and gamma/delta heterodimers, forms the T cell receptor-CD3 complex. The majority of T cell receptor (TCR) complexes in mice and humans consist of a heterodimer of polymorphic TCR alpha and beta chains along with invariant CD3 gamma, delta, epsilon, and zeta chains. T cell receptor-CD3 complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. This complex is critical for T-cell development and function, and represents one of the most complex transmembrane receptors. The T cell receptor-CD3 complex is unique in having ten cytoplasmic immunoreceptor tyrosine-based activation motifs (ITAMs). CD3D contains 1 ITAM domain and has been shown to interact with CD8A. In the mouse, knockout of CD3delta allows some degree of T lymphocyte differentiation since mature CD4 and CD8 as well as TCRgammadelta T lymphocytes are observed in the periphery. In contrast, deleterious mutation of the CD3 delta encoding gene in the human leads to a severe combined immunodeficiency characterised by the complete absence of mature T cell subpopulations including TCRalpha/beta and TCR gamma/delta. Defects in CD3D cause severe combined immunodeficiency autosomal recessive T-cell-

negative/B-cell-positive/NK-cell-positive (T-/B+/NK+ SCID) which is a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. In humans the absence of CD3 delta results in a complete arrest in thymocyte development at the stage of double negative to double positive transition and the development of gamma delta T-cell receptor-positive T cells is also impaired.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

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